

Impact of Foreign Shareholdings on Agency Cost: Empirical Evidence from Pakistan

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ABSTRACT

The purpose of this research is to investigate the effect of foreign shareholdings (FS) on agency cost and firm's performance in non-financial listed firms of the Pakistan Stock Exchange (PSX). The authors employed the data set of agency cost, FS and corporate governance from 2012 to 2016. According to the recent literature Foreign Shareholdings (FS) can also be used as a powerful remedy to mitigate the dual type of agency problems. This study uses two proxies for agency cost, i.e. AUR and DER, and one for firm performance, i.e. Tobin's Q, as dependent variables. Foreign direct investment is used as an explanatory variable and twelve independent variables. The study found that a higher level of the FS decreases the agency cost level under the asset utilisation ratio. It implies that foreign investment can benefit from employed assets due to superior abilities and advanced technology. While under discretionary expenditure ratio, FS has not significantly influenced agency cost. It is also found that FS significantly increase market base performance. The findings clarified that foreign investors play an important role in reducing agency costs and improving firm performance. In addition, the empirical evidence drifted towards the critical policy implication for emerging markets to allow foreign investors to invest in their firms to obtain maximum gains.



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INTRODUCTION

From the evolution of joint-stock companies, agency problems continued in organisations. Massive prior studies disclosed the effect of agency problems on firm performance. Agency theory brought forward agency problem and agency cost that arises from it. Agency cost is the internal cost that arises due to misalignment of the interest between the principal and agent (Panda & Leepsa, 2017). As prior studies indicated, organisations face different agency problems that take different shapes. These studies also provide evidence for decrement of agency problems with the help of different remedies, i.e. managerial ownership, board independence, board diligence, the board size, institutional ownership and leverage (Mustapha & Ahmad, 2011; Rashid, 2012; Siddiqui et al., 2013; Yegon et al., 2014). According to the recent literature Foreign Shareholdings (FS) can also be used as a powerful remedy to mitigate the dual type of agency problems. As Hai et al. (2018) found, FS also plays a vital role in mitigating agency problems and increasing firm value.

In the era of globalisation, foreign investment is a significant source of investment in most developing countries. It links the capital gap, managerial skill, advanced technology, a higher competitive business environment, and human capital formation (Adams, 2009; Kumar & Pradhan, 2002). Recently FS also gained significant research interest due to the globalisation of financial markets. Foreign investors having more advantages over local investors improve a firm's performance by extenuating agency problems. Most emerging economies loosened their financial markets to the world for substantial access to capital resources in developing economies and access to better corporate governance practices from developed economies (Kim et al., 2003). Pakistan has taken effective policies and violently pushed economic reform towards foreign investment since 1990s liberalisation.

With economic globalisation, foreign investment increases in Pakistan's stock market due to higher market risk. Foreign portfolio investment is the critical source that can attract FS towards Pakistan, which peaked in 2008 (M. A. Khan & Khan, 2011). Foreign shareholders play a substantial role in corporate governance practices and enable a more profound and broader capital market. J. Choi and Kim (2013) found that foreign institutional shareholders without private benefits of physical existence and culture differences increase corporate transparency at both market and firm levels. Foreign investors in emerging markets have advantages over domestic investors of experience, expertise and resources. Due to these advantages of foreign investment, firm monitoring increases, increasing firm performance (R. D. Huang & Shiu, 2009).

Pakistani firms face higher agency problems due to separation of ownership and control, growing business diversification and division in industry and firms. These firms have higher DER, lower AUR and Tobin's Q than other emerging and developed countries (Ghazali & Bilal, 2017). Javid and Iqbal (2010) report that in Pakistan, the mean value of concentrated shareholdings in 60 companies from 2003 to 2007 indicated that the top three stockholders keep more than 50% of stocks, whereas most non-financial businesses are family-owned businesses. Three main reasons give birth to the agency problem in Pakistan. Block holders at the top management of family firms, information asymmetry and weaker minority shareholder's rights protection (Gul et al., 2012). So Pakistani market having concentrated ownership is motivating for examination of agency problems.

The core focus of research in emerging economies like Pakistan on the part of corporate governance practices and on the relationship among ownership structure, corporate governance, board structure and firm performance. Due to the unavailability of data, limited research has been conducted on agency problems and corporate governance relationships. Nishat and Shaheen (2007) indicated that Pakistani firms that follow corporate governance practices increase firms' value, but poor corporate governance practices have poor performance. Javid and Iqbal (2008) examined that ownership structure, board composition governance index, and shareholding

governance index enhance the firm performance in Pakistan. [Ghazali and Bilal \(2017\)](#) also analysed the non-financial firms of PSX. They found that implementing the Security & Exchange Commission of Pakistan code of corporate governance enhances firm performance by decreasing agency costs.

As Pakistani firms have lower foreign shareholdings as compared to other states like USA, India, China, Japan and UK ([Ghazali & Bilal, 2017](#)). So little attention has been paid in Pakistan to foreign shareholdings and agency cost monitoring mechanisms. [Hong \(2017\)](#) suggests that getting more perceptions of the extent of corporate governance and agency cost requires more research. As mentioned above, no study is conducted to test the association between foreign shareholdings and agency costs in Pakistan. We test the relationship between corporate governance, ownership structure, and agency cost to fill this research gap. The importance of this study is that it checks the relationship of corporate governance and agency cost with consideration of foreign shareholding as an explanatory variable. This study tries to answer these research questions, i.e., what benefits PSX (Pakistan Stock Exchange) Non-financial firms receive from foreign shareholdings? Is the presence of foreign shareholdings reducing the agency problem of the firms in which they make investments? Is foreign investment increase the performance of Pakistanis firms? Former studies in Pakistan paid attention to corporate governance and ownership variables in domestic ownership and firm performance. Our research contributed to prevailing research by concentrating on the relationship between FS and agency cost. The current study also considers the relationship between foreign shareholdings and firm performance.

LITERATURE REVIEW

The agency problem is one of the ancient problems that continued since the corporations' development. Agency problem can't be ignored because each organisation probably face this problem in distinct forms. With time, agency problems take different forms that attract more researchers. Researchers also critically consider the agency problems and their different remedies to minimise them. Financial scientists also take a greater interest in agency problems and remedies. Different financial scientists and researchers empirically used different remedies to mitigate agency problems, e.g. managerial shareholdings ([Mustapha & Ahmad, 2011](#); [Rashid, 2016](#)), institutional shareholdings ([He & Kyaw, 2018](#)), concentrated ownership ([Martins et al., 2017](#)) and board independence ([Rashid, 2015](#)).

Due to globalisation and better corporate governance systems capital mobility across the countries increases. For well corporate governance, foreign investment is necessary for emerging and developing markets having feeble minority shareholders proper protection. Improvements in the corporate governance system occur with the upturn in FS ([Min & Bowman, 2015](#)). [Kansil and Singh \(2017\)](#) predicted that the foreign investments from strong shareholding protection countries also affect corporate governance and increase firm value by terminating low-performance management. [Naufa and Lantara \(2018\)](#) also found that foreign corporate holdings and foreign institutional shareholdings positively impact firm performance.

In emerging economies, foreign shareholders with minority shareholders effectively monitor agency problems caused by controlling ownership. In contrast, foreign investors with majority shareholdings exercise their power for entrenchment ([Viet, 2013](#)). [H. M. Choi et al. \(2014\)](#) also show that foreign industrial investors and foreign block holders in Korean firms favour investing in less control-oriented firms and securing their management control. With the help of management control, foreign investors directly better the corporate governance practices and indirectly influence the corporate governance through their investment decisions.

Gillan and Starks (2003) reported that foreign institutional shareholders play a dominant role in provoking changes in the corporate governance system. Foreign shareholders also contribute to better corporate governance and the transfer of new technology in invested firms (Naufa & Lantara, 2018). J. Choi and Kim (2013) also found that foreign institutional investors significantly affect corporate transparency. Foreign institutional investors monitor the firm's management well, leading to corporate transparency by protecting shareholders right against the controlling owners. Foreign institutional investors without private benefits of physical existence and culture differences increase corporate transparency at the market and firm levels. Foreign institution investment depends upon firm size, growth, profitability and risk. Foreign institutional investors also decrease the risk and cost of capital through foreign investment (Kansil & Singh, 2017).

Dahlquist (2001) argue that for investments, foreign shareholders give priority to firms that have more liquidity, low dividend, large firm size, large exports size and dispersed shareholding. That happens due to information asymmetry. They also found that foreign institutional shareholders have the edge over firms monitoring. W. Huang and Zhu (2015) examined that foreign investors are better monitors of state-owned controlling and concentrated shareholders than domestic institutional shareholders because foreign investors are less prone to political pressure than domestic institutional investors. Foreign shareholders protect the minority shareholders right by enhancing corporate governance practices. Foreign ownership also increases the firm performance by aligning the minority and majority shareholders interests (Xu et al., 2005).

From developed economies, foreign institutional investors conduct better corporate governance because they are from well-governed environments. The companies' ownership structure and corporate governance inspire foreign investors for investment. Foreign shareholders prefer to finance in corporations listed across the country, which provide monitoring practices that reduce agency costs (Mishra & Ratti, 2011). Foreign institutional investors from better governance institutions increase the quality and practices of corporate governance and strengthen the minority shareholders rights (Ananchotikul, 2008).

Foreign institutional investors from strong shareholders protection countries improve the corporate governance practices in developing countries: higher institutional ownership influences corporate governance and impacts firm value and board decisions. (Aggarwal et al., 2011). The stock of higher FS outperforms the stock of lower FS after controlling for firm size, transparency and export (R. D. Huang & Shiu, 2009). Wang and Shailer (2017) concluded that foreign investors better monitor corporate insiders and controlling shareholders, which lessen the agency problem and improve the firm performance. Foreign investment also exploits control's private benefits and hinders internal monitoring through external governance mechanisms.

Foreign shareholders play an important role in disciplining controlling ownership in the best interest of minority shareholders, which decreases the agency conflicts among minority and majority shareholdings. Watching foreign shareholders effectively monitors the governing owner's investment decisions. Due to agency problems between governing owners and minority owners, controlling shareholdings increase, investment efficiency decreases. (Park, 2019). Foreign shareholders play an important role from an independent position in corporate governance when controlling owners use their power for personal benefits and dominate minority shareholders rights. Gul et al. (2012) examined that institutional shareholdings, managerial shareholdings, small board size and board independence decrease agency cost. Javid and Iqbal (2010) found that concentrated ownership of directors, foreign shareholdings, institutional shareholdings and family ownership positively and significantly associated with firm performance. F. Khan and Nouman (2017) results are dissimilar to Javid and Iqbal (2010), which states that foreign shareholdings, managerial ownership and family ownership did not increase the value of the firms. While block holdings, institutional ownership, associated ownership and concentrated ownership enhance the

firm value by decreasing the agency cost of the firms.

Due to the separation of management from ownership, agency problem arises in corporations. As in Pakistan, most listed companies are family firms with concentrated ownership. In these firms, concentrated shareholders managed it and retained control of the firm. Concentrated ownership gives birth to agency problems between minority shareholders and block holders (Gul et al., 2012). Effective corporate governance practices are needed to discipline management and shareholders in the firm's best interest. Foreign investment can be used for better corporate governance practices to increase firms monitoring.

Through corporate governance, directly and indirectly, foreign shareholders influence firm performance and agency cost. Directly they refer to monitoring through directors, board of shareholders, more significant shareholders and creditors. While indirectly, they influence the prices of shares by threatening to sell shares with weak governance practices (Hai et al., 2018). Vijayakumaran (2019) also urges foreign investors in emerging markets to have more expertise and practice business knowledge than domestic investors. They play an essential role in effective monitoring and better managing discretions. Foreign investors influence corporate governance through direct intervention or indirect supply demand effect that lower monitoring cost and better corporate governance (R. D. Huang & Shiu, 2009).

H1: There is an inverse relation between discretionary expenditure ratio and foreign shareholdings.

Ownership by foreign investors also affects company agency costs. Huu Nguyen et al. (2020) pointed out that foreign investors can act as effective controllers in Vietnamese listed companies, reducing agency costs. Foreign investors increase the asset utilisation and have better management activities, resulting in higher company performance and lower agency costs. For emerging markets, compared to domestic shareholders, foreign investors play an important role in effectively monitoring and correctly managing discretions (Lu & Li, 2019). In particular, when foreign investors invest in a company, they understand the different international and cultural contexts to protect their investment by avoiding business risks, which increases financial transparency. The company also obtains international standards of corporate governance and international technology to operate effectively and honestly (Vijayakumaran, 2019).

H2: There is a significant positive relationship between asset utilisation ratio and foreign shareholdings.

As literature predicts the positive relationship between foreign ownership and firm performance. Due to an increased return on investment and investors' confidence, foreign shareholding is more advantageous in developing countries (Din et al., 2021). Many studies conclude a positive and significant effect of foreign shareholdings on firm performance. As Nofal (2020) conclude, foreign firm ownership in Indonesian firms is beneficial in the long run, for local companies, due to effective monitoring, facilitation of technology usage, international market development, and professional management. Overall, the results highlight the importance of the role played by the foreign ownership as moderating variables influence firm value, functioning as the control mechanisms for the agency conflict in Indonesia. This empirical evidence resolves the free cash flow agency problem, better market monitoring and control rent extraction (Faisal et al., 2020). Based on the above literature, we formulate the following hypothesis:

H3: There is a significant positive relationship between foreign shareholdings and firm performance (Tobin's Q).

DATA AND METHODOLOGY

Data and Sample

As the objective of this research paper is to check the effect of foreign shareholdings on agency cost in non-financial firms of Pakistan Stock Exchange (PSX). Our population include all the non-financial listed firms of PSX from 2012 to 2016. Total 310 non-financial firms are remained listed in PSX during the sampled period. Financial firms are omitted from the sample due to their unique ownership and governance structure. The research sample includes 218 firms out of 310 firms from 27 industries. Out of 310 listed firms, 92 firms are excluded due to; unavailable annual reports, having no sales and non-availability of patterns of shareholdings in financial statements.

Different sources are used to collect the data to construct research variables. Data of these research variables are collected from yearly financial statements of the firms issued by SBP, and data of growth, size and leverage are extracted from the balance sheet. Under Corporate Governance Code, 2002 clause XIX (i) and Companies Ordinance, 1984, firms listed in PSX must provide information on shareholdings patterns in their annual reports. So, we collect ownership variables data like foreign shareholdings, concentrated ownership, associated ownership, institutional ownership, managerial ownership, and ownership balance extracted from the shareholdings pattern in financial statements. Board Size, Board Diligence, Board Independence, CEO duality, Tobin's Q and agency cost variables data are also collected from yearly financial reports.

Table A. 1 in appendix presents the detail of all variables of this study.

Dependent Variables

Most of the non-financial businesses in Pakistan are family businesses. Three main reasons give birth to agency problems in Pakistan, i.e., Block holders at the top management of family firms, information asymmetry and weaker minority shareholder's rights protection, which lower the agency problem among shareholders and management, but this leads to another agency problem among minority and majority shareholders (Gul et al., 2012). Lei et al. (2013) also found that except US market in different markets, the main reason for agency costs is the controlling shareholders and minority shareholders conflicts. Due to these intertwined agency problems in Pakistani listed firms, this study uses two proxies for agency cost (AUR & DER) and one for firm performance (Tobin's Q) as dependent variables. These variables that we used for firm performance and agency cost are explained as follows.

DER is measured by administrative expenses divided by total yearly revenue, and this ratio measures how successful management controls a firm's administrative cost. These expenditures include business entertainment, executive compensation, and other administration costs. More significant agency conflict would be reproduced in greater managerial discretionary costs on administrative costs (Vijayakumaran, 2019).

AUR is measured by annual revenue divided by total assets used as a reverse proxy to measure agency cost. This ratio measure how successfully management deploys firm assets. A higher ratio shows that the firm generates more sales with lower agency costs from its assets. In contrast, a lower ratio shows low sales with higher agency costs (Ang et al., 2000; Florackis & Ozkan, 2009; Rashid, 2012). Tobin's Q (TQ) is measured as the summation of the market price of stocks and book value of total debts divided by the book value of the whole assets of the firm. This study used TQ as a proxy of firm performance, which is in line with earlier research studies (Aggarwal et al., 2011; Ferris & Park, 2005). TQ measures the organisation's market-based performance, and a higher ratio represents that the firm performs efficiently in the market.

Explanatory Variable

The foreign investment consists of direct and indirect foreign investments. While research in the context of Pakistan, study only direct foreign investment and firm's performance. There was also a lower sample size because of lower foreign direct investment. In Pakistan, no attention has been paid to foreign investment and agency cost relationships. This study includes all types of foreign investments and uses foreign shareholding as an independent variable to avoid sample bias. This study includes all PSX non-financial firms listed from 2012 to 2016.

Control Variables

This research study used twelve control variables for research analysis. Aside from dependent and independent variables, all variables that can impact the results should be controlled. Many studies discussed in the literature review used these variables as independent variables with a significant focus on these variables. So, these variables are significant for establishing a causal relationship between FS and Agency Cost. Our study only focuses on the impact of foreign ownership on agency cost; that's why we controlled for these variables.

Managerial Ownership (MO) is the percentage of ownership of management. Higher managerial ownership will decrease the Agency conflict. An increase in the managerial stakes will result in convergence of interest among firm's owners and managers, as predicted in agency theory by [Jensen and Meckling \(1976\)](#). MO of executives, directors, and CEOs unanimously helps reduce agency problems, align the interest of the owners and managers, and improve firm performance ([Jelinek & Stuerke, 2009](#); [Rashid, 2016](#)). Institutional ownership is the percentage of ownership of funds. Institutional investors play a significant role in mitigating agency problems because institutional investors monitor managers' actions and firm performance ([He & Kyaw, 2018](#); [Lin & Fu, 2017](#)).

Associated ownership (AO) is calculated by the percentage of associated ownership and denoted through AO. AO decreases agency costs by controlling unfavorable activities of management through strict monitoring. As a controlling stakeholder, associated owners also increase firm performance ([Abdullah et al., 2011](#); [D, 2006](#); [Yasser et al., 2017](#)). Concentrated ownership is the percentage of the largest shareholder. Concentrated shareholders have more significant benefits in participating more actively in firm monitoring than minority shareholders who cannot monitor management. Ownership concentration and debt act as the substitute for firms monitoring, which decreases the firms' agency cost ([Florackis, 2008](#); [Martins et al., 2017](#)). Ownership balance is the ratio of most extensive ownership to second largest ownership. Ownership structure with more concentrated ownership decrease agency cost because it prevents the single block holder from dominating management for their private benefits.

Board independence is the ratio of independent directors to the total board of directors. Independent boards minimise agency cost in the AUR extent of agency cost ([Rashid, 2015](#)). Independent board members look after minority shareholders and non-controlling shareholders ([Sanjaya & Christianti, 2012](#)). Board size is the number of all board members. Large board size has less efficiency and higher agency cost. Large board size creates free-riding problems and communication barriers, decreasing the monitoring efficiency and increasing agency cost ([Rashid, 2015](#); [Siddiqui et al., 2013](#)). Board diligence is the number of meetings held during the year. As attendance of board meetings increases, agency cost decreases by preventing management from improper behaviour and increasing the accountability of the board of directors ([Ananchotikul, 2008](#)).

CEO duality is dummy variable mark one if CEO holds both positions otherwise zero. CEO duality leads to investment misallocation and inefficiency. CEO has more power; that's why board

monitoring become weaker (Aktas et al., 2018; Rashid, 2012). Leverage is the ratio of total debt to total assets, and debt plays a vital role in reducing agency costs. Debt has significant monitoring and disciplining impact on agency cost (Nazir et al., 2012).

This research study also controls for Growth (GRA) and firm size (LNA) (see Table A. 1).

MODELS

We organise a balanced panel data set for analysis. So, the panel data set models are used for the examination of data. Three models are used in this study, two for agency cost and one for firm performance.

Agency cost models can be represented in the simplest form i.e.

$$AGENCY_{it} = \alpha + \beta_1 X_{it} + \beta_2 Y_{it} + \varepsilon_{it} \quad (1)$$

Where,

The Agency cost of a firm *i* at time *t* is to be measured by using two proxies i.e., AUR and DER. So, this model is estimated separately for DER and AUR.

α = Intercept

β = Coefficients of *X* and *Y* variables.

X_{it} = Independent variables.

Y_{it} = Control variables.

According to our research hypothesis, this study contains three models.

This model tests the association between foreign ownership and agency cost using AUR and DER (Vijayakumaran, 2019).

$$\begin{aligned} AUR_{it}/DER_{it} = & \alpha + \beta_1 FS_{it} + \beta_2 GRW_{it} + \\ & \beta_3 LEV_{it} + \beta_4 IO_{it} + \beta_5 OC_{it} + \beta_6 MO_{it} + \beta_7 AO_{it} + \beta_8 B_{it} \\ & + \beta_9 B_{lit} + \beta_{10} BD_{it} + \beta_{11} CEOD_{it} + \beta_{12} LNA_{it} + \\ & \beta_{13} OBit + year_{it} + firm_{it} + \varepsilon_{it} \end{aligned} \quad (2)$$

This model tests the association between foreign shareholdings and firm's performance by using Tobin's Q (Din et al., 2021).

$$\begin{aligned} Tobin's\ Q_{it} = & \alpha + \beta_1 FS_{it} + \beta_2 GRW_{it} + \beta_3 LEV_{it} + \beta_4 IO_{it} + \\ & \beta_5 OC_{it} + \beta_6 MO_{it} + \beta_7 AO_{it} + \beta_8 B_{it} \\ & + \beta_9 B_{lit} + \beta_{10} BD_{it} + \beta_{11} CEOD_{it} + \beta_{12} LNA_{it} + \\ & \beta_{13} OBit + year_{it} + firm_{it} + \varepsilon_{it} \end{aligned} \quad (3)$$

Our study used a balanced panel data set for analysis. The Hausman test determines the appropriate model from random and fixed effect models for analysis. This test checks the correlation of explanatory variables with the error term. The fixed effect model is applicable if the error term is correlated with explanatory variables. Otherwise, the random effect model shows that the error term is not correlated with explanatory variables (Ghazali & Bilal, 2017).

The data presented in this paper include cross-sectional and time-series data that constitute a panel data model, which refers to data sets consisting of multiple observations on each sampling unit. Panel data analysis techniques Fixed effects model (FEM) and random effects model (REM) are applied to investigate the relationship between agency cost and foreign shareholdings. This study also applied Second Stage least squares (2SLS) for comparison and to improve the accuracy of the regression coefficient. (Huu Nguyen et al., 2020)

EMPIRICAL RESULTS AND DISCUSSION

Descriptive Statistic

Results of a descriptive statistic of all variables are presented in Table 1. The average value of DER is 0.05, which is greater than the mean value of other researchers, i.e., 0.085, so in Pakistan, the agency problem is higher than in China. The mean value of AUR is 1.29 compared to the mean value of Singh and Davidson III (2003) i.e. 1.464. These results again indicate that Pakistani listed firms have lower agency costs than Chinese firms, but as compared to US large corporations, Pakistani firms have higher agency costs. The mean value of Tobin's Q is 1.56, with a standard deviation of 1.49. While the FS mean value is 6.31, having a standard deviation of 16.38 shows that FS in most sampled firms is less than 10%.

Table 1.

Descriptive Analysis for the Variables Employed in this Research

| Variables | Mean | Median | Maximum | Minimum | Std. Dev. |
|-----------|-------|--------|---------|---------|-----------|
| DER | 0.05 | 0.02 | 0.94 | 0.00 | 0.09 |
| AUR | 1.29 | 1.11 | 10.38 | 0.03 | 0.97 |
| Tobin's Q | 1.56 | 1.05 | 14.90 | 0.25 | 1.49 |
| FS | 6.31 | 0.00 | 89.01 | 0.00 | 16.38 |
| IO | 15.44 | 11.75 | 95.13 | 0.00 | 14.46 |
| OC | 36.13 | 30.00 | 99.00 | 0.00 | 21.62 |
| OB | 5.17 | 2.00 | 99.00 | 1.00 | 10.82 |
| MO | 25.57 | 14.64 | 98.43 | 0.00 | 27.49 |
| LEV | 0.61 | 0.55 | 7.80 | 0.01 | 0.51 |
| LNA | 3.72 | 3.67 | 5.77 | 1.35 | 0.69 |
| GRW | 0.19 | 0.06 | 5.67 | -0.74 | 2.29 |
| CEO | 0.16 | 0.00 | 1.00 | 0.00 | 0.36 |
| BS | 9.05 | 9.00 | 15.00 | 5.00 | 1.51 |
| BI | 12.69 | 11.11 | 69.23 | 0.00 | 11.84 |
| BD | 5.33 | 5.00 | 19.00 | 2.00 | 2.02 |
| AO | 28.57 | 19.39 | 99.09 | 0.00 | 28.96 |

Correlation analysis

Table 2 represent the Correlation analysis of the all-paired variables. FS has a significant positive correlation with DER against our expected relationship, while FS has an insignificant positive correlation with AUR. According to our expected relationship, FS has a significant positive correlation with TQ, and MO has the highest negative correlation with AO.

Regression Results

This section represents the regression analysis for the developed hypothesis. Hausman test is used to determine the appropriate model from fixed and random effect models for analysis. Hausman test suggests that the fixed effect model is applicable for both proxies because the test rejects the random effect model at 1% and 5% significance levels. Unobserved heterogeneity can be controlled through fixed effects regression in the sample firms. We also apply the Hausman test for our third hypothesis of the firm's performance. The result suggested that fixed effect regression is appropriate because the test rejects the random effect model at a 1% significance level (Faisal et al., 2020).

Foreign Shareholdings and Agency Cost

Table 3 explain the results which support our first research hypothesis. The result shows a significant positive relationship between FS and AUR that's are similar to the results of Huu Nguyen et al. (2020). FS has a coefficient of 0.01399 with a probability value of 0.00070, which shows foreign shareholdings are statistically significant at a 1% level. This means firms with a higher percentage of FS significantly enhance asset efficiency. The result is consistent with our first hypothesis that foreign shareholdings increase AUR significantly. By following Ferris and Park (2005) for taking potential endogeneity into account, we also employ the 2SLS method using lagged FS as an instrumental variable. As shown in Column 3, FS still has a significant and positive relation with AUR, as expected.

Institutional Ownership also has a significant positive relationship with AUR. Firms having more stakes of institutional enhance firm's asset efficiency significantly. Ghazali and Bilal (2017) and Din et al. (2021) also found similar results that institutional ownership increases firm monitoring, increasing asset efficiency. Leverage (LEV) has a significant positive relationship with AUR, which shows that an increase in level of debt in capital structure diminishes agency problems by increasing firm monitoring.

Concentrated Ownership has a significant negative relation with AUR, contrary to the expectations and results of Din et al. (2021) under the AUR agency cost proxy. As Javid and Iqbal (2010) and Gul et al. (2012) argued, most Pakistanis firms have concentrated shareholdings and weaker minority shareholder's rights protection. So due to weaker minority shareholders, the rights protection agency problem increases under AUR with increased concentrated ownership.

Associated ownership also has a significant positive relationship with AUR, which suggests that increasing AO percentage increases the firm's asset efficiency by increasing firm monitoring. Similar to prior research, results suggest that sample firms' assets utilisation efficiency decreases with firm size. Because of larger firm size, monitoring inefficiency increases which increase agency cost. MO, Asset growth and CEO duality are positively but insignificantly related to the AUR. Moreover, OB, BI, and BS were negatively and insignificantly related to firms' efficiency in asset utilisation.

Table 4 shows the results of fixed-effect regression and 2SLS of DER and FS. FS are negatively but insignificantly related to DER. According to Vijayakumaran (2019), these findings are identical under the DER agency cost measure. The result is insignificant for three primary reasons. In Pakistan, the shareholdings of the majority of the listed organisations are the concentration of different groups, i.e., AO, IO, family ownership, and insiders (F. Khan & Nouman, 2017).

Table 2.

Degree of Association measured by Pearson's Correlation Coefficient among the Variables

| | DER | AUR | TQ | FS | IO | AO | OC | OB | MO | LEV | LNA | GRW | CEO | BS | BI | BD |
|-----|-------|-------|-------|----------|----------|----------|----------|----------|----|-----|-----|-----|-----|----|----|----|
| DER | 1 | | | | | | | | | | | | | | | |
| AUR | -0.30 | 1 | | | | | | | | | | | | | | |
| | *** | | | | | | | | | | | | | | | |
| TQ | 0.05* | 0.19 | 1 | | | | | | | | | | | | | |
| | | *** | | | | | | | | | | | | | | |
| FS | 0.09 | 0.03 | 0.24 | 1 | | | | | | | | | | | | |
| | *** | | *** | | | | | | | | | | | | | |
| IO | 0.00 | -0.05 | -0.03 | -0.01 | 1 | | | | | | | | | | | |
| AO | 0.01 | 0.06 | 0.18 | -0.17*** | -0.12*** | 1 | | | | | | | | | | |
| | | ** | *** | | | | | | | | | | | | | |
| OC | 0.05* | 0.02 | 0.24 | 0.11*** | -0.10*** | 0.51*** | 1 | | | | | | | | | |
| | | | *** | | | | | | | | | | | | | |
| OB | -0.02 | 0.10 | 0.16 | -0.04 | -0.06* | 0.35*** | 0.58*** | 1 | | | | | | | | |
| | | *** | *** | | | | | | | | | | | | | |
| MO | -0.13 | 0.04 | 0.19 | -0.27*** | -0.35*** | -0.62*** | -0.33*** | -0.23*** | 1 | | | | | | | |
| | | | *** | | | | | | | | | | | | | |
| | *** | | | | | | | | | | | | | | | |

Continued on next page

Table 2 continued

| | DER | AUR | TQ | FS | IO | AO | OC | OB | MO | LEV | LNA | GRW | CEO | BS | BI | BD |
|-----|-------|------|------|-------|--------------|-------|-------------|-------|-------|-------|-------|------|---------|---------|------|----|
| LEV | 0.14 | 0.23 | 0.26 | 0.05* | -0.10 *** | 0.01 | 0.09 *** | 0.05 | 0.03 | 1 | | | | | | |
| | *** | *** | *** | | | | | | | | | | | | | |
| LNA | - | - | 0.19 | 0.14 | 0.18 | 0.20 | 0.16 | 0.17 | -0.34 | -0.07 | 1 | | | | | |
| | 0.11 | 0.11 | | *** | *** | *** | *** | *** | *** | ** | | | | | | |
| | | | *** | | | | | | | | | | | | | |
| | *** | *** | | | | | | | | | | | | | | |
| GRW | - | 0.00 | - | -0.01 | 0.07 | -0.01 | -0.02 | 0.00 | -0.03 | -0.04 | 0.01 | 1 | | | | |
| | 0.02 | | 0.02 | | ** | | | | | | | | | | | |
| CEO | - | 0.04 | - | -0.10 | -0.15 | -0.15 | 0.00 | 0.06* | 0.19 | 0.04 | -0.13 | - | 1 | | | |
| | 0.06* | | 0.11 | *** | *** | | | | *** | | *** | 0.01 | | | | |
| | | | *** | | | | | | | | | | | | | |
| BS | 0.03 | 0.04 | 0.15 | 0.05 | 0.15 | 0.08 | -0.01 | -0.09 | -0.21 | -0.01 | 0.39 | 0.00 | - | 1 | | |
| | | | | | *** | *** | | *** | *** | | *** | | | 0.22*** | | |
| | | | *** | | | | | | | | | | | | | |
| BI | 0.02 | 0.03 | 0.19 | 0.11 | 0.15 | 0.03 | 0.15 | 0.06* | -0.20 | 0.07 | 0.21 | - | - | 0.20 | 1 | |
| | | | | *** | *** | | *** | | *** | ** | *** | 0.03 | 0.13*** | *** | | |
| | | | *** | | | | | | | | | | | | | |
| BD | - | - | - | -0.08 | 0.01 | -0.02 | -0.03 | -0.02 | -0.05 | -0.01 | 0.23 | 0.00 | 0.01 | 0.18 | 0.12 | 1 |
| | 0.01 | 0.07 | 0.01 | *** | | | | | | | *** | | | | | |
| | | | | | | | | | | | | | | *** | *** | |

Statistically significance of variables correlation is represented by *, **, *** at 10%, 5% and 1% confidence levels respectively.

Table 3.

Fixed effect and 2SLS Regression of Foreign Shareholdings and Asset Utilization Ratio

| Variable | Fixed Effect Coefficient | 2SLS Coefficient |
|-----------------------------|--------------------------|------------------|
| C | 9.38491*** | 0.93850*** |
| FS | 0.01399*** | .01132*** |
| IO | 0.00768** | .00617** |
| OC | -0.00544* | -0.00629*** |
| OB | -0.00289 | 0.01761*** |
| MO | 0.00403 | 0.00869*** |
| LEV | 0.27193*** | -0.03059 |
| LNA | -2.27847*** | -0.27233*** |
| GRW | 0.00206 | 0.03737*** |
| CEO | 0.00179 | 0.32507*** |
| BS | -0.01749 | 0.07747*** |
| BI | -0.00092 | 0.00562 |
| BD | 0.00553 | -0.00089 |
| AO | 0.00893*** | 0.01051*** |
| R ² | 0.84270 | 0.026710 |
| F-statistic 20.0086 | | |
| Hausman Test P Value 0.0000 | | |

Statistically significance of variables is represented by ***, **, * at 1%, 5% and 10% confidence levels respectively.

Table 4.

Fixed Effect and 2SLS Regression of Foreign Shareholdings and Discretionary Expenditure Ratio

| Variable | Fixed Effect Coefficient | 2SLS Coefficient |
|----------|--------------------------|------------------|
| C | 0.18521 | 0.19101*** |
| FS | -0.00021 | -0.00017 |
| IO | 0.00012 | -0.00050 |
| OC | 0.00139*** | 0.00047 |
| OB | 0.00001 | -0.00028 |
| MO | -0.00042 | -0.00124*** |
| LEV | 0.00221 | 0.01123 |
| LNA | -0.05184*** | -0.03368*** |
| GRW | 0.00015 | -0.00112 |
| CEO | -0.01145 | -0.00237 |
| BS | 0.00269 | 0.00475* |
| BI | 0.00059** | 0.00030 |

Continued on next page

Table 4 continued

| | | |
|----------------|------------|-------------|
| BD | 0.00179 | -0.00092 |
| AO | -0.00076** | -0.00083*** |
| R ² | 0.782332 | 0.0788 |
| F-statistic | 13.42341 | |
| Hausman Test | P | Value |
| | 0.03400 | |

Statistically significance of variables is represented by ***, **, * at 1%, 5% and 10% confidence levels respectively.

However, concentrated shareholdings have several costs, such as agency conflicts among minority and majority shareholders. These problems mainly arise when concentrated shareholdings gain closely complete control of the firm and use their control for personal welfare at the expense of minority stockholders (Shleifer & Vishny, 1997). While in Pakistan, foreign shareholders have minority shareholdings in non-financial sampled firms and have minor or no incentive to exert monitoring behaviour.

Second, in Pakistan, stockholders having 20% stakes are entitled to go to court to record a complaint in case of any wrongdoing. Further, stockholders holding 10% or more stakes can only Board record a complaint with the SECP (Sarwar et al., 2018). In contrast, FS in more than 85% of non-financial sampled firms is less than 5% and has an average value of 6%. Third, in Pakistan, shareholders rights aren't fully protected, so foreign investors cannot play a dominant role in decreasing agency problems. After considering potential endogeneity by employing the 2SLS method, using lagged foreign shareholdings as an instrumental variable. The results are shown in Column 3; FS still has a negative relation with DER.

LNA and AO are significantly and negatively correlated with DER, consistent with Vijayakumaran 2019. This means that firms with large sizes have economies of scale, decreasing agency costs. AO also has a significant positive relationship with AUR, which suggests that increasing the AO level enhances the firm's asset efficiency by increasing firm monitoring. OC has a significant positive relationship with AUR, contrary to the expectation. As mentioned above, Pakistani firms have concentrated ownership that used their power for private benefits, due to which agency problem increases with an increase in ownership concentration.

BI has a significant positive relation with DER according to our expectations. An increase in the level of BI increases the level of agency cost in sample firms. These findings are also contrary to the findings of Ghazali and Bilal (2017). IO, OB, leverage, GRW, BS and BD have positive but insignificant relationships with DER. However, CEO duality and MO have an insignificant negative relationship with DER.

Foreign Shareholdings and Firm's Performance

Table 5 indicates the results of fixed-effect regression of FS and Tobin's Q. Results indicate that FS positively and significantly influences the firm's performance. This means that an increase in FS improves firms monitoring and improves firm performance. These findings are identical with the previous research of Aggarwal et al. (2011); Ferris and Park (2005); Nofal (2020); and Din et al. (2021), which indicate that foreign investment significantly affect the firm performance.

Results are also robust after taking endogeneity into account, where FS still has a significant positive relationship Tobin's Q. Similarly, the positive and significant impact of AO, BI, IO and leverage indicates that these variables also increase firm performance. These results are also identical with

prior research (F. Khan & Nouman, 2017).

Table 5.

Fixed effect and 2SLS Regression of Foreign Shareholdings and Tobin's Q

| Variable | Fixed Effect Coefficient | 2SLS Coefficient |
|-----------------------------|--------------------------|------------------|
| C | -0.46578 | -1.59265 |
| FS | 0.01934*** | 0.2405*** |
| IO | 0.01062* | 0.00575 |
| OC | 0.00677 | 0.00326 |
| OB | -0.02693*** | 0.01254** |
| MO | 0.00198 | 0.00696** |
| LEV | 1.10538*** | 0.79030*** |
| LNA | 0.25431 | 0.17320** |
| GRW | -0.00259 | -0.00645 |
| CEO | 0.03277 | -0.24405 |
| BS | -0.05161 | 0.08061** |
| BI | 0.01168*** | 0.01250*** |
| BD | -0.01577 | -0.01802 |
| AO | 0.01256** | 0.01188*** |
| R2 | 0.8095 | |
| F-statistic 15.8683 | | |
| Hausman Test P Value 0.0000 | | |

Statistically significance of variables is represented by ***, **, * at 1%, 5% and 10% confidence levels respectively.

Furthermore, OB's negative and significant relationship shows that balance holding increases the firm's performance. Firm size, OC, CEO duality and MO have an insignificant positive association with firm performance. While Growth, BD and BS have an insignificant negative relation with firm performance.

CONCLUSION

This research study tests the relationship among agency cost, FS, firm performance and control variables of Pakistanis listed companies from 2012 to 2016. This research study emphasises pinpointing the mechanisms, especially the role of foreign shareholdings, which are beneficial in decreasing agency costs in Pakistan. This study uses fixed effect and 2SLS regression to analyse the balanced panel data. This study employs two distinct measures of agency cost and one for firm performance; AUR, DER and Tobin's Q ratio, respectively.

Using two different agency cost measures, this research study indicates that higher the FS decreases the agency cost level under AUR. This means that foreign shareholders can benefit from invested assets due to superior abilities that decrease agency costs. While under the DER measure, FS has not significantly influenced agency cost. Moreover, it is also found that FS significantly increase firm performance by using the TQ ratio. This means that foreign investors can also increase the market-based performance of the invested firms by increasing information disclosures and stock liquidity. So, FS play an essential role in decreasing agency cost by increasing firm monitoring in Pakistani listed firms.

This study indicates that FS also plays a significant role in increasing firms monitoring and performance. So, it is beneficial for foreign policymakers to use these findings to reform foreign investment policies, e.g., in tax exemption incentives, foreign shareholders rights protection, and corporate governance designing, like Chania QFIs foreign investment scheme. Managers and owners of the companies also pay special attention to the increase in foreign investment by good financial performances, higher governance standards, higher liquidity, and more information disclosures, which better corporate governance and performance of the firm. It is also recommended that minority shareholders' rights be weaker in Pakistan so that foreign investment can remedy this problem.

Future studies may consider financial firms to check the association among agency cost and ownership variables. Furthermore, as most of the Pakistani listed firms are family-owned and public sector firm's researchers will use the family ownership variable to check the effect of FS on agency conflict between family-owned and non-family-owned firms. As in our sample, more than 80% of the firms have minority FS so research in the future needs to be conducted by using foreign investment as concentrated ownership. The researcher will also use other proxies of agency cost to confirm this relationship between agency cost and FS. Since the 2012 Pakistan Stock Exchange demutualisation process of capital market reforms, this paper checks the impact of foreign investment on agency cost starting from 2012. As Sharif (2017) discussed, there are two justifications for the demutualisation of stock exchanges, i.e. 1st for increasing global investment and 2nd advancement in technology. So, the demutualisation process has a significant impact on listed companies.

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APPENDIX

Table A. 1.

Explanation of the Variables

| | Variable | Description | Measure | Expected Relationship |
|-----------------------|----------|---------------------------------|--|-----------------------|
| Dependent variables | DER | Discretionary expenditure ratio | Administrative expenditure/Sales | |
| | AUR | Asset utilization ratio | Sales/Total assets | |
| | TQ | Tobin's Q | Total market value of firm + Debt /Total assets | |
| Independent variables | FS | Foreign shareholdings | Percentage of foreign shareholdings | - |
| | LEV | Leverage | Total debt/Total asset | - |
| | GRW | Growth | Asset growth rate | - |
| | AO | Associated ownership | Percentage shareholdings of Associated Ownership | - |

Continued on next page

Table A. 1 continued

| | | | | |
|-------------------|-------------|-------------------------|---|-----|
| Control variables | <i>IO</i> | Institutional ownership | Percentage shareholdings of fund | - |
| | <i>LNA</i> | Firm size | Ln (total asset) | +/- |
| | <i>OC</i> | Ownership concentration | Percentage of top shareholding | - |
| | <i>MO</i> | Managerial ownership | Percentage shareholdings of management | - |
| | <i>BS</i> | Board size | Total number of board members | + |
| | <i>BI</i> | Board independence | Proportion of Independent directors in the board | - |
| | <i>BD</i> | Board diligence | Frequency of Board meeting held | - |
| | <i>OB</i> | Ownership balance | Top shareholding/Second shareholding | + |
| | <i>CEOD</i> | CEO-Chairman duality | A dummy variable If CEO of board same as a chairman it would be defined as 1 other wise 0 | + |